UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF INDIANA

LIGTEL COMMUNICATIONS, INC.,

      Plaintiff,

    v.

BAICELLS TECHNOLOGIES INC.;
BAICELLS TECHNOLOGIES NORTH AMERICA
INC.,

      Defendants.

Case No. 1:20-cv-00037-HAB-SLC

DECLARATION OF
RANDY MEAD

I, Randy Mead, declare the following:

1.   I am CEO and General Manager for LigTel Communications, Inc.

2.   LigTel was founded as a subsidiary of Ligonier Telephone Company in April 1998 and is a family-owned company that proudly serves approximately 1,500 wireless service customers across seven counties in northeastern Indiana.

I.   HNI Code

3.   I understand that every mobile telephone in the United States has a unique fifteen-digit number, called an International Mobile Subscriber Identity ("IMSI"). From my work, I know that the first six digits of the IMSI is known as an HNI code or PLMN. This number identifies the carrier. The remaining nine digits identify that particular phone.

4.   It is my understanding that HNI codes are always six digits in the United States. In fact, I have never heard of a five-digit HNI code in the United States. Other countries do use five-digits, but the United States does not. All HNI codes registered and assigned are on the IMSI administrator's website. Exhibit 1 is a true and correct copy of the iconectiv IMSI FAQ webpage, https://imsiadmin.com/faq, accessed on April 1, 2020.

5.   Based on my experience, I am aware that HNI codes are assigned by the IMSI Oversight Council, an open industry committee of the Alliance for Telecommunications Industry Solutions (ATIS), which is in turn an organization that develops technical and operational standards and solutions for the telecommunications industry. Exhibit 2 is a true and correct copy of the IMSI Assignment and Management Guidelines and Procedures ("IMSI Guidelines") (Aug. 2018), found on ATIS's public website https://www.atis.org/01_committ_forums/ioc/docs/IMSI-Guidelines-v15.1.1.pdf; sections 6 and 7 address the responsibilities of HNI assignees. It is my understanding that ATIS prescribes a process for applying for and maintaining a HNI code, which

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include an application fee, annual fees, efficiently managing the HNI, participating in IMSI audits, and deploying the HNI within the time specified.

6.   In November 2011, LigTel applied for an HNI Code and was assigned code 311980 by ATIS through iconectiv, the United States IMSI administrator. Exhibit 3 is a true and correct copy of the letter from Telcordia d/b/a iconectiv confirming LigTel's HNI code assignment. In accordance with applicable rules, LigTel timely deployed that code, has been using that code, and has annually paid the applicable maintenance fee for that code. Exhibit 4 is a true and correct copy of LigTel's proof of payment for the annual maintenance HNI code fees for 2018 and 2019.

II.   Trade Secrets and Proprietary Information

7.   I know that LigTel takes a variety of measures to protect its trade secrets and proprietary information. For instance, LigTel requires all employees to sign confidentially agreements and to be trained on cybersecurity policies. Exhibits 5 and 6 are true and correct copies of LigTel's cybersecurity policies, and Exhibit 7 is a true and correct copy of several confidentiality agreements signed by LigTel employees. In addition, LigTel has entered into non-disclosure agreements with companies with whom it shares any propriety and sensitive trade secrets, including Huawei. Exhibits 8 and 11 are redacted true and correct copies of non-disclosure agreements between Huawei and LigTel. The attached exhibits are examples of the measures that LigTel takes to protect its trade secrets and proprietary information and are not an exclusive list of the measure taken.

8.   As part of its commitment to investing in cutting-edge infrastructure for its wireless service customers, in 2012 LigTel upgraded to an LTE network and engaged Huawei to do so. At that time, LigTel was the first and only company in North America to deploy a LTE core manufactured by Huawei to establish its network. LigTel worked closely with Huawei to design

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and build the network—including sharing with Huawei LigTel's proprietary and sensitive information about the engineering, architecture, configurations, IP infrastructure, and technology employed in LigTel's network.

9.   In order for Huawei build LigTel's LTE core, LigTel would need to share its radio frequency configurations, IP infrastructure (both physical and logical), its network engineering and architecture, the technologies LigTel employed to connect its networks, and LigTel's encryption code with Huawei. Accordingly, LigTel entered non-disclosure agreements with Huawei, which are attached as Exhibits 8 and 11.

III.   3GPP Standards and Roaming

10.   From my work in this industry, I know that 3rd Generation Partnership Project ("3GPP") is the international governing body responsible for mobile network standards. Exhibit 9 is a true and correct copy of a February 23, 2020 email regarding the 3GPP, attaching the 3GPP standards. 3GPP is a partner to ATIS. Through my work, I came to understand that the 3GPP specification defines how roaming authentication is supposed to take place between home and visitor networks. Roaming authentication works because the "visited" network uses the device's HNI code to identify the device's carrier. It is therefore important for that authentication process that each entity use its own HNI code.

11.   Baicells claims to be 3GPP compliant in their documentation and on their website, however, their use of an HNI code that appears to the world to be LigTel's HNI code is not following these 3GPP standards. Exhibit 10 is a true and correct copy of a printout from Baicells's website on April 1, 2020, identifying Baicells as 3GPP compliant.

IV.   **Interference and Investigation**

12.   In June 2019, Josh Wentworth, LigTel's Network Operations Supervisor, informed me that Sandhills Wireless in Nebraska was using an HNI code that appears to the world to be LigTel's HNI code. He also informed me that Sandhills had obtained that equipment from a company called Baicells, and that another Indiana company, New Lisbon Broadband and Communications, also used Baicells equipment. I spoke with John Greene at New Lisbon Broadband and Communications, an Indiana company, and informed him that the HNI code they were using was not a valid code, that it appeared to be LigTel's HNI code, and that Baicells was not authorized to use LigTel's HNI code. He confirmed that the IMSI started with "311980." New Lisbon also confirmed that Baicells had directed it to 31198 and that it did not know Baicells lacked authorization to use that code.

13.   We informed New Lisbon that we had reached an agreement with Sandhills authorizing them to use our code temporarily. Greene let me know he thought there are probably ten to twelve other wireless internet service providers in Indiana that use Baicells's equipment. We ultimately chose not to send New Lisbon a "cease and desist" letter because we were trying to work in good faith with a fellow Indiana company.

14.   LigTel has approximately 1,500 wireless service customers in northeastern Indiana. Based on my knowledge of the market and industry, I believe that more than 50,000 individuals are served by providers who use Baicells's equipment. Based on Baicells's public website, other publications, and my understanding of how Baicells conducts its business, I believe that all of those consumers using Baicells's equipment are using HNI code 31198, which appears to the world

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as 311980. It is also my understanding, from reviewing public websites, that the founders of

Baicells went from working at Huawei to founding Baicells.

V.   First Meeting With Baicells

15.   On or around July 12, 2019, Wentworth contacted Baicells; Baicells wanted to meet

and discuss the matter and, on July 29, 2019, Baicells traveled to our LigTel offices in Ligonier,

Indiana. The meeting was attended by three Baicells representatives: Rick Harnish, Baicells

Director of WISP Markets in North America; Bo Wei, North American President of Baicells; and

Ronald Mao, the Baicells technical advisor who worked on LigTel's core when he was formerly

employed at Huawei. Josh Wentworth, Mike Troup, and I attended the meeting, along with

counsel for LigTel.

16.   Mao previously worked at Huawei and specifically on technical projects related to

LigTel's LTE core. In fact, Mao had been one of the Huawei employees who worked on

maintaining and expanding LigTel's equipment after the initial installation. Mao had access to all

of the confidential trade secrets that LigTel shared with Huawei and was subject to the non-

disclosure agreements.

17.   At the meeting, Baicells acknowledged that it was using and directing its customers

to use 31198 as an HNI code, which appeared to the world to be LigTel's. Baicells did not attempt

to explain, much less justify, that action and suggested that it intended to continue using 31198 in

perpetuity.

18.   We asked Baicells to stop using an HNI code that appeared to the world to be our

code and to migrate its customers to Baicells's own HNI code. Baicells appeared unwilling to do

so—going so far as to claim that changing HNI codes would be logistically impossible. Migrating

LigTel's customers to a new HNI code would require LigTel to change the SIM card of every

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single one of its customers. That would require LigTel employees to go to every LigTel customer location, likely after business hours, and to offer a discount to existing customers to compensate for the inconvenience. The cost to migrate its customers to a new HNI code would be approximately $400,000, though could be even higher.

19.   Because Baicells refused to agree to stop using an HNI code that appears to the world to be LigTel's HNI code, I offered to transfer LigTel's HNI code to Baicells for a fee that would cover LigTel's costs to migrate customers to a new HNI code, other costs LigTel has incurred related to Baicells's actions, and compensate LigTel for the inconvenience. Baicells again refused.

20.   Baicells then offered to acquire LigTel's HNI code and to grant LigTel a right to use that number. Baicells's offer, however, would not have alleviated the harm to LigTel or avoided future risk and confusion because LigTel's network and any network using Baicells equipment would continue to be identified by the same HNI code.

21.   Wei then asked to speak to me alone, to which I agreed. When we were alone, Wei offered that Baicells would pay LigTel $100,000 to obtain LigTel's HNI code, and then Baicells would grant LigTel a secondary use license to use its own HNI code. I again explained to Wei that LigTel could not agree to a deal in which both companies used the same HNI code. There are a variety of risks including consumer confusion, interference issues, and public safety issues that could arise if both entities used the same HNI code.

22.   Wei then stated that he knew that Huawei had manufactured and configured LigTel's core, though I had never shared that information with Wei or any other Baicells employees. Wei then asked me if I knew that Ronald Mao had formerly worked at Huawei. I said

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yes. Wei then offered to have Mao "get into" our Huawei-manufactured core and reprogram it himself, so Mao could do it for free and we would not have to pay Huawei to do so.

23.   I understood Wei's offer to mean that Baicells had the ability to access LigTel's network and reprogram LigTel's core—therefore showing that Baicells had acquired and had access to LigTel's trade secrets (including LigTel's encryption code and network architecture).

24.   Wei also offered to give LigTel discounts on Baicells equipment. I told Wei that I did not feel comfortable discussing such a proposal and went back to join the larger meeting.

25.   Since that meeting, Baicells has not agreed to return LigTel's trade secrets or to not use those secrets.

26.   I understand that Baicells has now been assigned its own HNI code, 314030, yet Baicells has only partly migrated its customers to that code and has not stopped using an HNI code that appears to the world to be LigTel's. While Baicells claims to use its new HNI code on all of its new SIM cards for new customers, Baicells's customers who were already using the LigTel HNI code have continued to use that code. Baicells's workaround, where it broadcasts its HNI code to the customers still using SIM cards with LigTel's HNI code, does not alleviate the problems and risks: subscribers of Baicells's customers would still appear to law enforcement and to roaming networks to be using an HNI code that appears to be LigTel's.

VI.   ATIS Process

27.   After the meeting with Baicells, LigTel attempted to resolve the HNI-code issue through ATIS, which offers parties a way to attempt to voluntarily resolve disputes related to HNI codes without interfering with the parties' right to pursue relief elsewhere.

28.   On August 21, 2019, our attorney sent Tom Goode at ATIS a letter regarding Baicells's use of an HNI code that appears to the world to be LigTel's HNI code. LigTel's counsel

explained that it was requesting formal action from ATIS and/or the IMSI Oversight Council (IOC) to resolve the ongoing unauthorized use of Ligtel's HNI code (311980) by the cloud-based LTE core solution provider, Baicells. Exhibit 12 is a true and correct copy of the letter LigTel sent to Goode. The letter explained that Baicells's use of LigTel's HNI code violated regulations and frustrated LigTel's ability to maintain up-to-date and accurate assignment records as required under the IMSI Guidelines. LigTel requested that the IOC direct Baicells to immediately cease and desist from using HNI code 311980 or any substantially similar network identification code (such as PLMN 31198) within any portion of its operations.

29.   From August through the present, LigTel and Baicells have been engaged with ATIS and the IOC regarding Baicells's plan to migrate to its assigned HNI code. Baicells submitted a migration plan to ATIS, and now submits progress reports regarding that Migration plan. It is my understanding from these progress reports that Baicells claims it is in the process of migrating to its new HNI code. However, Baicells's migration plan is not adequate. It is my understanding that Baicells is not replacing SIM cards for its existing customers using LigTel's HNI code. Thus, LigTel's HNI code will continue to be used by persons or entities who are not LigTel end users.

30.   In sum, the ATIS process has proved ineffective. Baicells has refused to propose an acceptable or credible resolution to the situation, has failed to provide a binding and detailed timeline of when it will cease using an HNI code that appears to be LigTel's HNI code, and has intimated that it may take the position that ATIS lacks authority to order relief. Baicells is still behind its timetable. I lack confidence that the ATIS process will adequately resolve the HNI-code issues (if at all), and LigTel's trade secret-related issues are outside the scope of the ATIS process.

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31.   LigTel is unaware of the full scope of Baicells's use of an HNI code that appears to the world to be LigTel's HNI code—LigTel cannot determine how many subscribers in how many jurisdictions appear to be LigTel subscribers based on their HNI code but are not actually LigTel subscribers.

32.   LigTel has received requests from law enforcement for information on LigTel subscribers. My understanding is that law enforcement is able to identify a suspect or target's cellular service provider based on the customer's IMSI number, which, as previously explained, has as the first six digits the HNI code used by the subscriber's equipment. My understanding is that law enforcement thus may use the HNI code to determine which company to serve with legally authorized process for a search, seizure, or surveillance when necessary.

33.   I do not believe that Baicells has any good faith intention to stop using LigTel's HNI code or to stop possessing or using LigTel's trade secrets.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April __, 2020

Randy Mead

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